



***my*Durham**

# **Intelligent Communities Plan**

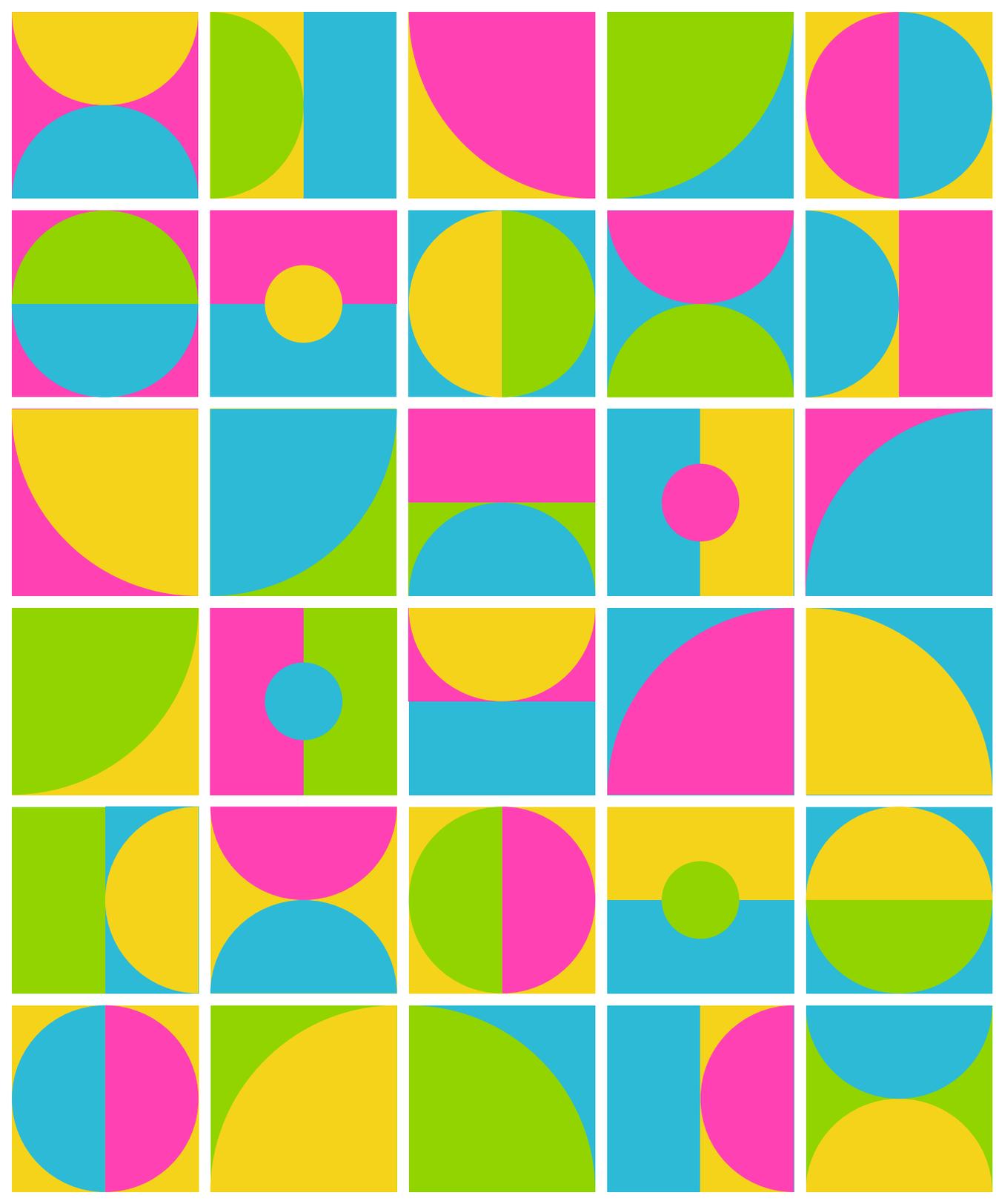
**Our Framework for a Smart and  
Connected Region**

**2020**



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# Acknowledgements

## Intelligent Communities Team

- Alison Burgess, Manager Corporate Initiatives
- Kalyan Chakravarthy, Chief Information Officer
- Riaz Razvi, Broadband Specialist

- Sandra Austin, Director Strategic Initiatives
- Sonia Salamone, Manager Business Development and Investment Attraction

## Contributors

- Alan Robins
- Amanda Bathe
- Andrew Wismer
- Ashley Bridgeman
- Charlotte Pattee
- Christine Drimmie
- Daniel Carlin
- Dave Dankmeyer
- Diane Tan
- Elizabeth Scott
- Gloria Duke-Aluko
- Ian McVey
- Jacek Sochacki
- Jack Phelan
- Jackie Nielsen
- Jamie Austin

- John Riches
- Jonah Kelly
- Joseph Green
- Kiersten Allore-Engel
- Laura Stephan
- Mark McKnight
- Mary-Anne Pietrusiak
- Melissa Hutchinson
- Melissa Westover
- Michael Binetti
- Nicole Walton
- Rob Halko
- Sarah Hickman
- Sonya Hardman
- Stacey Jibb
- Steven Kemp

- Tracey Tyner Cavanagh
- Vidal Guerreiro
- Zareen Butt

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- Kristi Honey, Township of Uxbridge
- Rachael Matheson, Town of Ajax
- Sarah Klein, Town of Whitby

## Designer

- Edward Zucca

Created in consultation with  
the Canadian Urban Institute

# Message from the Regional Chair and CAO



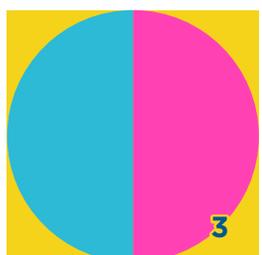
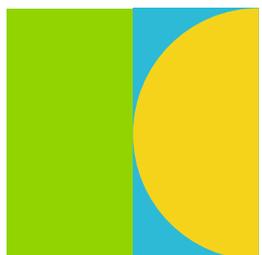
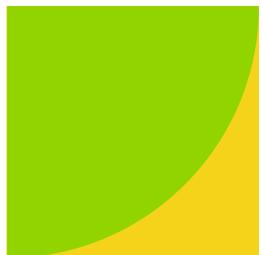
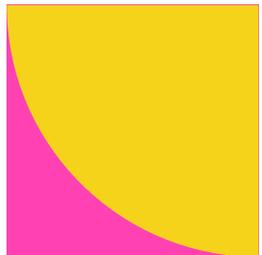
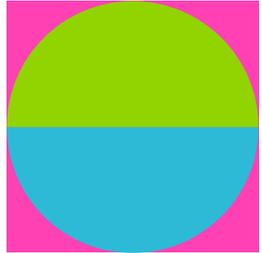
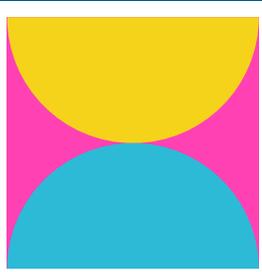
An intelligent Region isn't a new idea for us—it's something we have been striving to achieve in our policies and projects for many years. But it's something that has changed throughout the years, as we continue to learn from and adapt to our ever-evolving future. This new plan will build collaboration, innovation and data-driven decision making into our existing plans. Durham Region already has many intelligent projects underway, and this new plan will align these projects with the Durham Region Strategic Plan to ensure that we are supporting our overall vision of the future; a future where Durham Region is the best place to live, work, play, grow, learn and invest.

**John Henry, Regional Chair and CEO**



Through the development of the myDurham Intelligent Communities Plan, we are aligning current and future projects to ensure our shared vision of a more modern and forward-thinking organization. Projects such as myDurham 311 and CityStudio Durham show that we are willing to invest in improving the customer experience, and in co-creating the future with our next generation of problem solvers. This new plan will help to foster even more projects such as these within our organization, and keep us moving collectively towards a more dynamic and resilient Region.

**Elaine Baxter-Trahair, Chief Administrative Officer**



# Introduction

## Our Vision for a Smart, Connected Durham

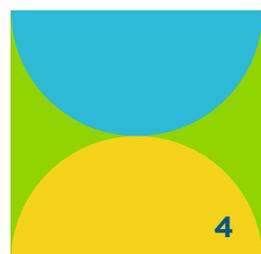
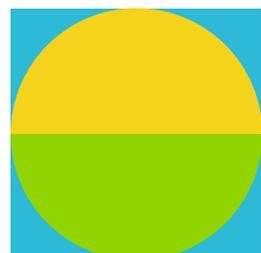
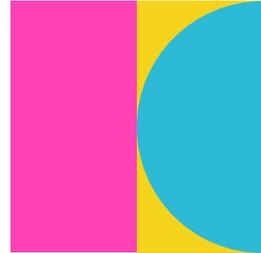
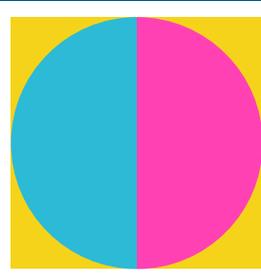
Durham Region, in partnership with our community, will address our collective challenges in a smart, connected way.

Implementation of the *myDurham* Intelligent Communities Plan will improve economic competitiveness, engage citizens and increase connectivity to support smarter, healthier, more equitable and sustainable communities.

## Why is now the time for the *myDurham* Intelligent Communities Plan?

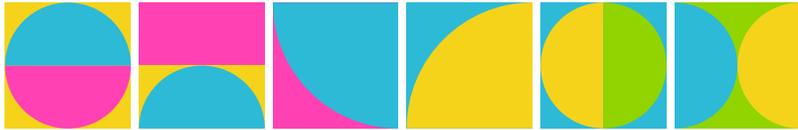
Durham is already an Intelligent Region. As an organization, we are undergoing digital transformation and we have been leading the way in innovation. Through the development of this framework and action plan, we compiled dozens of projects already underway. The *myDurham* Intelligent Communities Plan will align these projects and set out the principles to guide our future direction.

The concept of 'smart cities' has evolved over the past decade. While it used to focus strictly on data and technology, municipal leaders have learned that being smart is more than that. According to the Intelligent Communities Forum of Canada, intelligent communities are more than technology and infrastructure – they are focused on solving problems that matter, not just the ones that technology can address. The Region of Durham is transitioning from being a Smart Region – one that collects and uses data and technology to improve efficiency and service delivery – to a collection of connected Intelligent Communities. We will still use data and technology to improve service delivery, but it will be informed by our residents, businesses and partners. Durham's Intelligent Communities Plan will build collaboration, innovation and data-driven decision making. Many of our local municipalities are already on this journey. The City of Pickering and the City of Oshawa have each been recognized as Intelligent Communities.



# The digital transformation of municipal services is underway

The COVID-19 pandemic has accelerated the transition to digital service delivery. Whether through a customer portal or online engagement platform, the way that residents interact with their municipal government is changing.



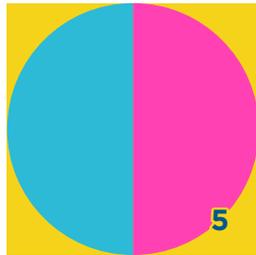
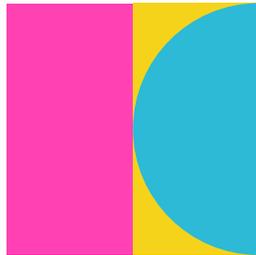
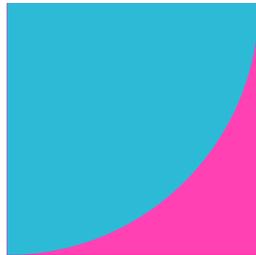
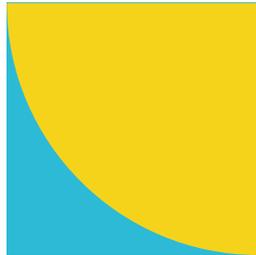
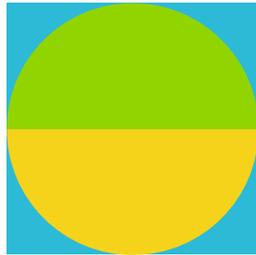
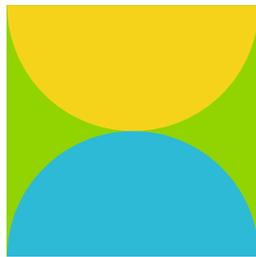
# The digital divide remains an important issue of equity

The transition to digital service delivery has exacerbated the inequities experienced by people who don't have access to adequate broadband. Businesses are unable to take full advantage of digital platforms, residents are unable to work from home and children can't participate in virtual learning activities. Broadband is critical infrastructure for the ongoing prosperity and success of residents and businesses.



# Durham's innovation sector is growing

Local businesses, post-secondary institutions and municipal governments are coming together in new ways to form a thriving community that drives innovation, growth, productivity and develops the workforce for the future.



# Our Process for Developing the Intelligent Communities Plan

The *myDurham* Intelligent Communities Plan brings together ongoing work from across Regional departments and from our partners. A Steering Committee worked with the Canadian Urban Institute to lead the development of the plan using three methods:

## 1. Background research and analysis

Initial research was conducted in collaboration with the Canadian Urban Institute. It consisted of reviewing existing municipal smart city plans and interviewing municipal staff. Best practices of replicable smart city projects and strategies were also identified to understand the Region's resource requirements for adopting an intelligent approach. Governance models, procedures and protocols that the Region could implement as part of an intelligent communities' approach were identified.

## 2. Community engagement and consultation

The Region recently completed an extensive public consultation process for the development of the Strategic Plan 2020-2024. Through the five-month community engagement process, more than 1,500 individuals participated in face-to-face conversations, completed the Strategic Plan community survey and shared their ideas through the Your Voice Durham online portal. The public consultation led to the development of five goal areas with distinct priorities. To ensure alignment with community input, the *myDurham* Intelligent Communities Plan will identify opportunities to use smart approaches to help achieve our Strategic Plan goals.

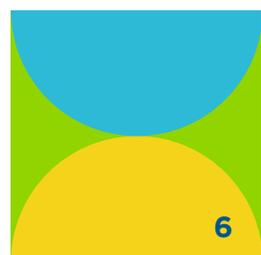
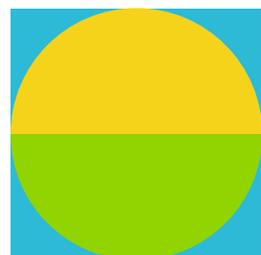
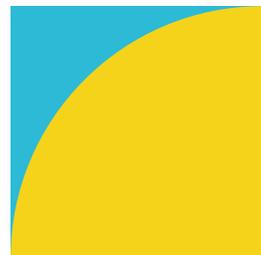
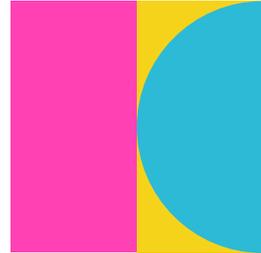
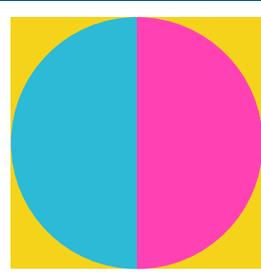
A focus group was conducted with leaders from Durham's eight local area municipalities to collect ideas about themes the Region should consider, challenges to implementing smart approaches and opportunities for collaboration.

A survey was used to gather additional information.

## 3. Internal staff engagement

A series of five focus groups were conducted with interdepartmental Regional staff to inform the Plan. The focus groups gathered input on current and emerging initiatives in each area, overall project ideas and themes, potential challenges and suggested partnerships.

A survey accompanied the focus groups to ensure all staff had an opportunity to provide feedback.



The **myDurham** Intelligent Communities Plan doesn't replace an existing plan or strategy. Instead, we will use the Plan to guide the deployment of intelligent approaches, enabling the Region to achieve our objectives while leaving space for new and innovative ways of providing service to our community.

The **myDurham** Intelligent Communities plan supports Durham's existing and future plans and strategies including:

- Durham Strategic Plan 2020-2024
- Age-Friendly Strategy and Action Plan
- Anti-Racism Framework
- Asset Management Plan
- Community Safety and Well-being Plan
- Corporate Energy Conservation and Demand Management Plan
- Diversity and Inclusion Strategy
- Durham Community Climate Adaptation Plan
- Durham Community Energy Plan
- Health Neighbourhoods Plan
- Housing Master Plan
- Intelligent Transportation Systems Plan
- Low Carbon Fleet Strategy
- Municipal Comprehensive Review
- Nuclear Sector Strategy
- Regional Broadband Strategy
- Regional Cycling Plan
- Regional Official Plan
- Transportation Master Plan
- Waste Management Strategy

# myDurham Intelligent Communities Plan

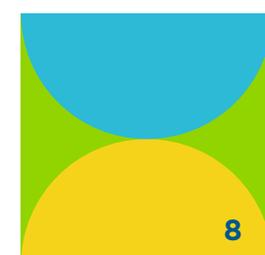
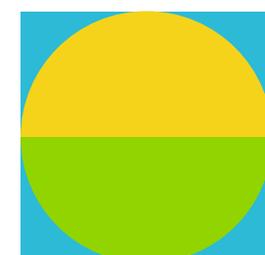
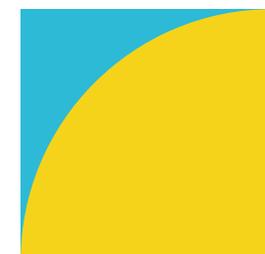
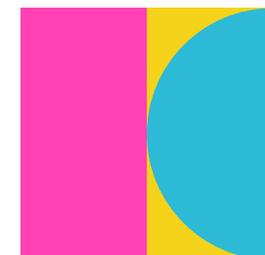
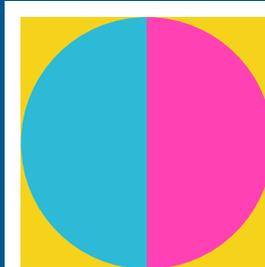
## Putting People at the Centre

Durham's approach began with putting 'people' at the centre by collecting feedback from our residents, businesses and partners. Through ongoing engagement, it will continue to evolve.

## Goals

The Region of Durham established our goals for the next five years through the development of the Strategic Plan 2020-2024, including:

- **Environmental Sustainability** - To protect the environment for the future by demonstrating leadership in sustainability and addressing climate change.
- **Community Vitality** - To foster an exceptional quality of life with services that contribute to strong neighbourhoods, vibrant and diverse communities, and influence our safety and well-being.
- **Economic Prosperity** - To build a strong and resilient economy that maximizes opportunities for business and employment growth, innovation and partnership.
- **Social Investment** - To ensure a range of programs, services and supports are available and accessible to those in need, so that no individual is left behind.
- **Service Excellence** - To provide exceptional value to Durham taxpayers through responsive, effective and fiscally sustainable service delivery.



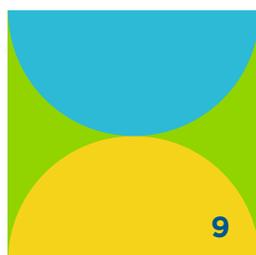
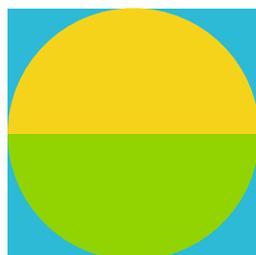
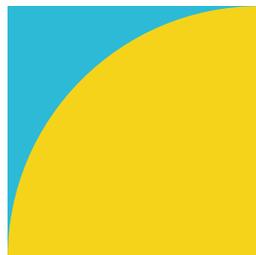
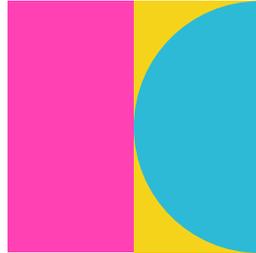
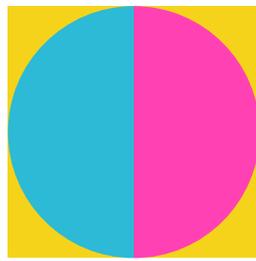
The *myDurham* Intelligent Communities Plan aligns with our Strategic Plan. Through the development of a set of guiding policies and procedures, ongoing community engagement and additional partnership, the Intelligent Communities Plan will support the implementation of strategic priorities.



## Principles

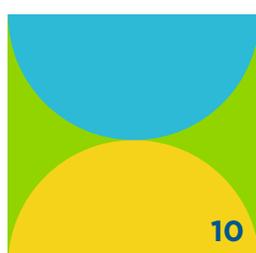
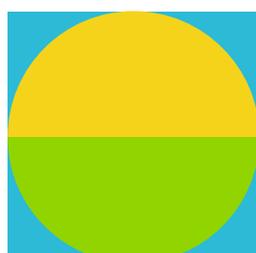
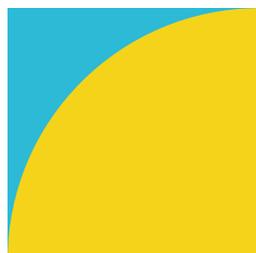
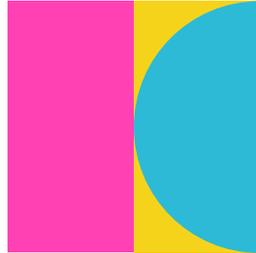
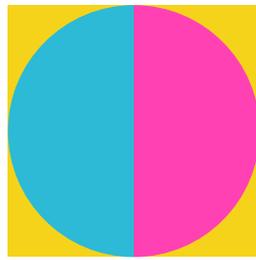
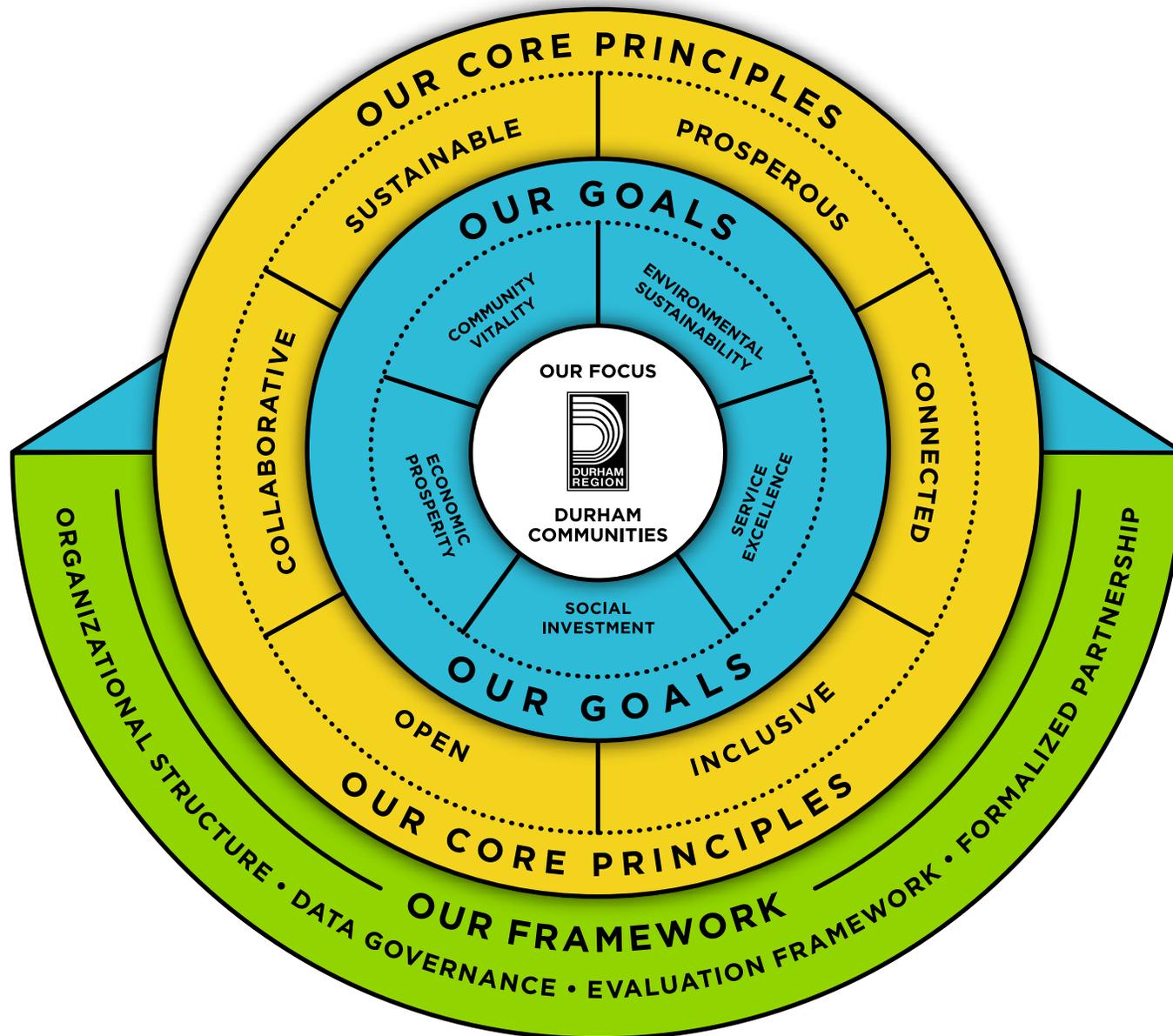
*myDurham* Intelligent Communities Plan is based on core principles:

- ***myDurham* is Open** – There will be many ways to engage and co-create Durham’s Intelligent Communities
- ***myDurham* is Collaborative** – Partnership and collaboration will ensure Durham is a place where we work together to support our residents and businesses.
- ***myDurham* is Connected** – Whether by physical or virtual infrastructure, Durham will be a place for connecting with your community.
- ***myDurham* is Inclusive** – All Durham residents will be welcome and able to take part in activities and enjoy experiences across the region.
- ***myDurham* is Prosperous** – Durham will be a place of economic opportunity, supportive of business and piloting innovative ideas.
- ***myDurham* is Sustainable** – Durham will be a place for environmentally sustainable living.



# The Framework

Created in consultation with Canadian Urban Institute and informed by best practices from leading municipalities, this framework will guide implementation of the *myDurham* Intelligent Communities Plan.



# What We Will Achieve

## Collaboration

- Continuously engage with residents, businesses and partners.
- Seek new partners who share a common vision.
- Foster existing partnerships and build an ecosystem of collaboration.

## Innovation

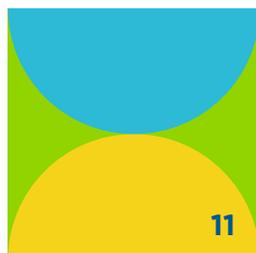
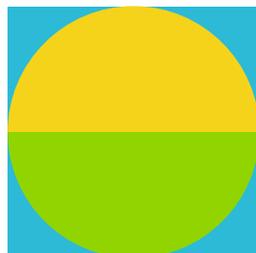
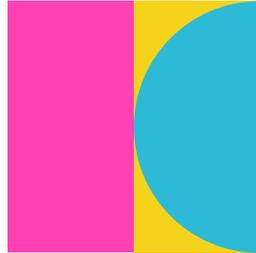
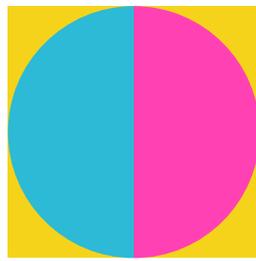
- Pilot novel solutions to address challenges.
- Celebrate ideas to foster a culture of innovation.

## Data-Driven Decision Making

- Use data provided by our citizens, gathered through technology or generated from our infrastructure to make decisions.
- Collect, analyze and take action on the data to improve the lives of the people in our communities.

## Implementation

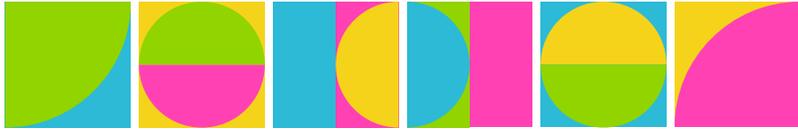
- Seek opportunities to scale projects.
- Apply for funding opportunities.
- Explore innovative approaches to procurement.



# The Framework

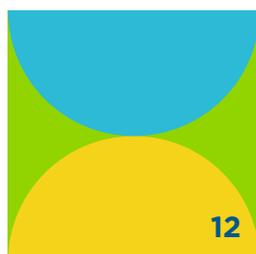
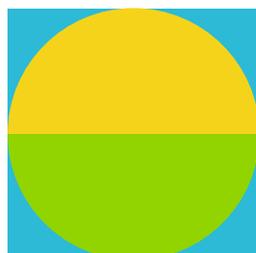
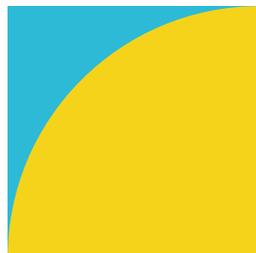
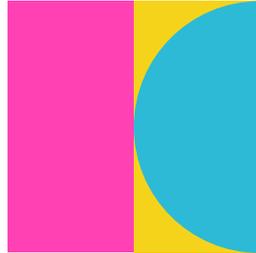
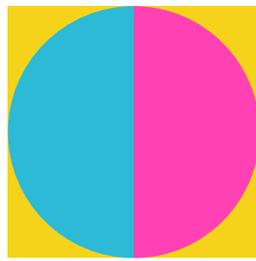
## a) Organizational Structure

Implementation of the *myDurham* Intelligent Communities Plan requires input from across departments and integration with our local area municipalities and community partners. It is important that everyone have a voice in the process. We envision three main governance structures.



**1) Regional Intelligent Communities Steering Committee** - Within the Region of Durham, staff in the Office of the Chief Administrative Officer will centrally manage and coordinate the Intelligent Communities Plan. The project lead will be supported by a multi-departmental Steering Committee. Together they will:

- Build business cases for smart initiatives and identify financial resources
- Foster an internal culture that embeds emerging smart values and promotes innovation, collaboration, creativity, openness, and risk taking
- Foster relationships with regional partners to implement new initiatives, such as local area municipalities, utilities, local tech innovators and educational institutions
- Develop a data governance model, policies and standards
- Support the development of values-based procurement
- Maintain the project and partnership inventory
- Implement continuous public and stakeholder engagement
- Develop an evaluation framework and collect data
- Develop and execute a coordinated communications plan



**2) Intelligent Communities Advisory Committee** – The Advisory Committee will include representation from local area municipalities, educational institutions and members of the public to ensure alignment among community initiatives, participate in an evaluation process and inform future directions.

**3) Continuous Public Engagement** – The Plan will be based on comprehensive and ongoing community engagement and consultation. We will use a variety of engagement tools and methods, including:

- **Your Voice Durham** platform to regularly engage the community in developing intelligent community ideas and developing collaborations.
- **Annual Hello Tomorrow** event to engage the community and stakeholders in the development of smart solutions for Region of Durham.

## b) Data Governance

The foundation of success for the Region's Intelligent Communities Plan will be a robust, transparent data governance process. It is critical to ensure privacy, the protection of personal information, and all applicable legislative and regulatory requirements. The governance structure will include the following:

- Meaningful consent from residents
- Standardized Intelligent Communities policies and processes that create opportunities for the safe sharing of aggregated, non-confidential data to inform decision-making across departments and partners where possible
- Consideration of technological infrastructures, solutions and services that are provided through open digital service standards and ethically sourced data to ensure interoperability, inclusion and opportunity
- Embedded principles of Privacy by Design (PbD) in every project to protect residents' digital rights and privacy
- Data Use Guidelines that would apply to all entities seeking to collect or use Regional data

## c) Evaluation Framework

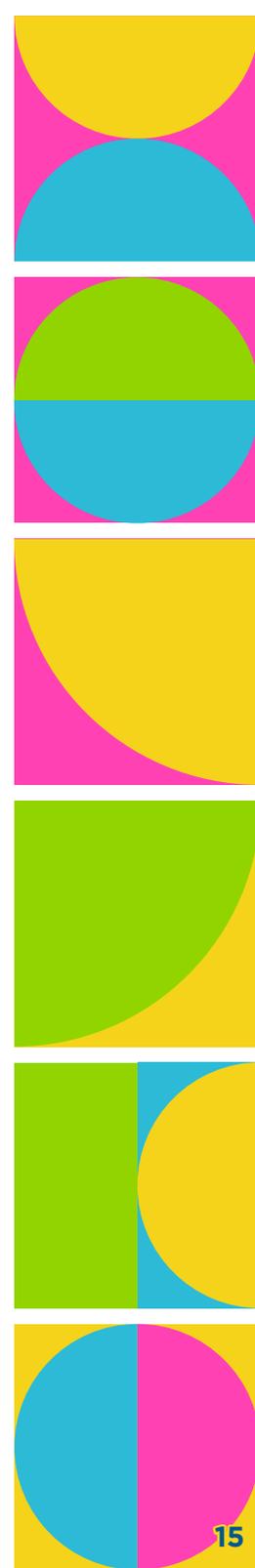
An evaluation framework, developed in consultation with the Intelligent Communities Advisory Committee, will help measure the success of the Intelligent Communities Plan. Through this process, we will collect baseline data, identify key performance indicators and annually evaluate project success.

## d) Formalized Partnership

Durham can't become a truly intelligent region without the help of many partners. Using this framework as a guide, we will continue to seek partnerships with community organizations and leverage our innovation ecosystem to initiate pilot projects. Regional staff will develop a set of guiding policies and procedures to ensure alignment and coordination. Data governance policies will protect our residents in project implementation.

Key partners in the innovation ecosystem include:

- Spark Centre, Durham's Regional Innovation Centre (RIC), provides support to earlier stage and pre-revenue technology start-up companies. Spark Centre acts as a "one-stop shop" providing business coaching and mentorship, learning tools and connections to business and research networks. The centre also offers help with access to investment and funding, ultimately creating jobs and wealth within Durham Region. Spark Centre has advised close to 600 companies in all facets of business and has 19 professionals focused on helping clients achieve scalable revenue and long-term success. Clients range in focus and include wearable technology, clean tech, health, software and invention.
- The 1855 Accelerator is a public private partnership (PPP) to support the growth of high potential technology companies. It fills a gap that exists in the Durham Innovation Ecosystem so that rapidly growing companies can stay in Durham to continue their trajectory. At the accelerator, entrepreneurs can move to the next stage in the business development cycle; receive greater depth and breadth of support; and secure resources and capital to grow their business.
- Innovation Village, a regional community hub in Ajax, for talent, technology and entrepreneurship. With a focus on Artificial Intelligence, cyber security, and robotics, Innovation Village is a key ingredient in the Region of Durham's innovation eco-system.
- The Co-iLab Hub was created by the Community Innovation Lab and partners to provide entrepreneurs with access to affordable work space, professional development, skills training and business advisors and mentors. The Co-iLab Hub also offers entrepreneurs opportunities to connect with other entrepreneurs, industry leaders, innovators and thinkers. It is a central access point for all entrepreneurs to collaborate, convene and co-create.

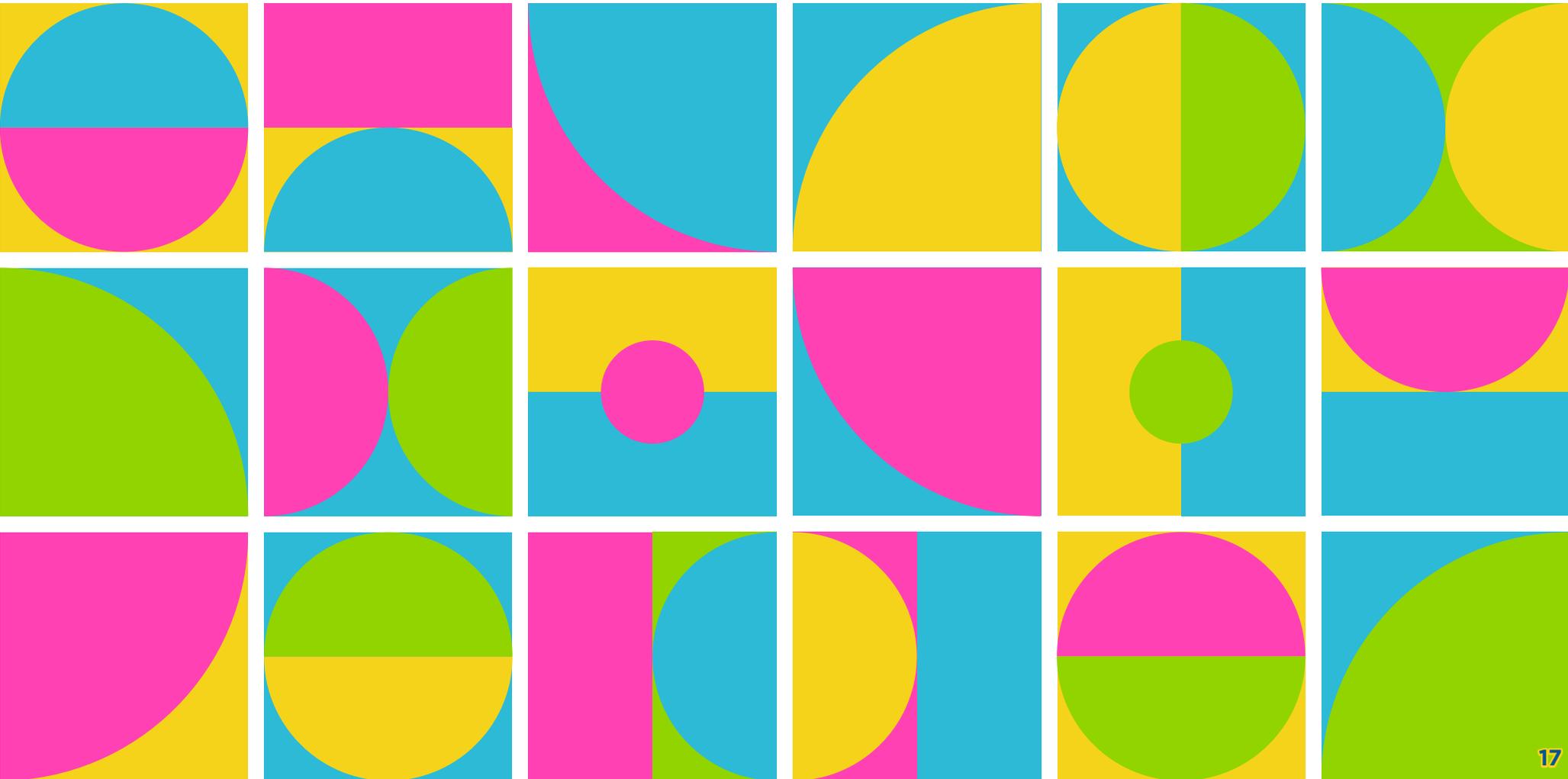


## Innovative Collaborations with Post-Secondary Institutions

- **CityStudio Durham** - CityStudio is a proven model of experiential learning and civic engagement focused on developing tomorrow's leaders by bringing municipal government to the classroom. It is a collaboration between the Region of Durham, Durham Regional Police Service, Durham College, Ontario Tech University and Trent University Durham Greater Toronto Area. By furthering connections between municipal government, academic institutions, and the community, Durham's post-secondary students can apply their skills, creativity, and entrepreneurial spirit to real-world challenges facing our community to shape a better future for all of Durham.
- **TeachingCity Oshawa** - Launched in June 2017, TeachingCity brings together the City of Oshawa and its education and research partners - the Canadian Urban Institute, Durham College, Ontario Tech University, Trent University Durham Greater Toronto Area, and the University of Toronto's Faculty of Applied Science & Engineering. The partners address Oshawa's urban issues through innovation, collaboration, applied research and shared experiential learning opportunities with the aim to position Oshawa as a local, national and global community of urban research and learning.

# Intelligent Communities Implementation

Durham Region has many intelligent projects underway. The *myDurham* Intelligent Communities Plan will align these projects to ensure integration with future projects.

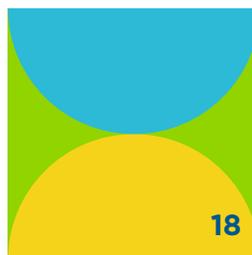
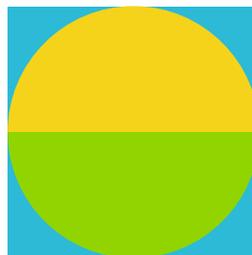
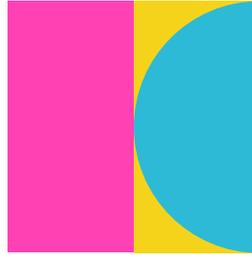
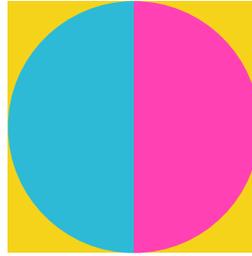


# Environmental Sustainability

The [Regional Cycling Plan](#) update incorporates feedback gathered from residents. Residents have been clear that the main concern is safety and the Region will explore new ways to increase cyclist and driver knowledge about safety on the road. As part of our overall effort to improve environmental sustainability, the Region will begin addressing connectivity of routes to ensure that cycling is a viable option for residents and tourists to explore Durham. We've received thousands of points of information - and we're using them to build a better Regional Cycling Plan

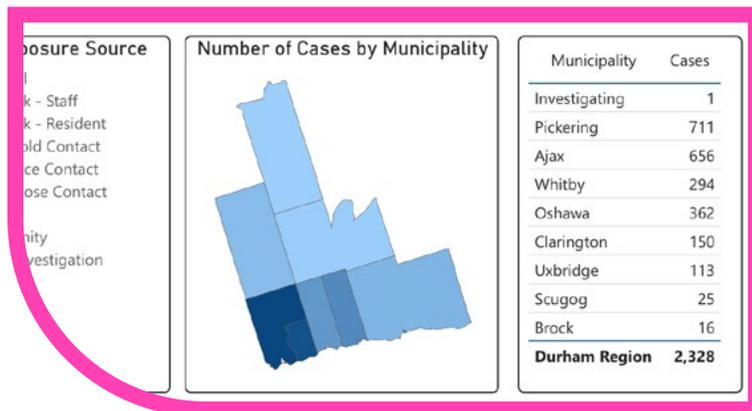


The Region recognized early that in order effectively tackle a wicked problem like climate change, we were going to need to work with our partners. The ambitious [Durham Home Energy Savings Program](#) has been developed alongside municipal partners, energy utilities and financial institutions. The Program will leverage data from our partners to create an engaging digital platform that highlights customized energy savings opportunities, and will provide a Home Energy Coach service to answer residents' questions along the way. We are excited to be on this journey to a low carbon Region.

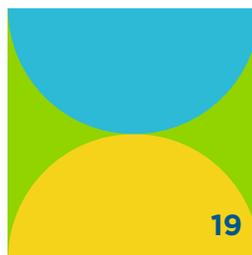
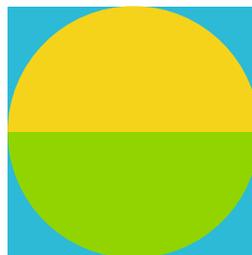
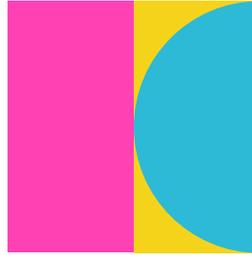
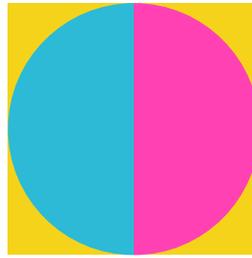


# Community Vitality

The Primary Care Outreach Program was developed in response to support residents who were homeless or at risk of becoming homeless. A paramedic provides acute medical care and the social worker provides counselling and support services. Through virtual assessments and connection to nurses and doctors, vulnerable individuals can receive treatment they might not have previously. This program ensures all residents have access to social and medical care.



COVID-19 has had unprecedented impact on our communities. As a method to keep the public informed about the risk and aware of the cases in the community, the Durham Region Health Department collaborated with Information Technology and Planning and Economic Development to create the COVID-19 data tracker. As the pandemic evolved, the tracker did as well, growing from a website reporting positive cases to a comprehensive tracking and reporting system that equips the community with data to inform decision making.



## Economic Prosperity

Access to high-speed internet is essential for Durham residents, businesses and institutions to take advantage of the digital future. As part of implementing [Durham's Broadband Strategy](#), the Region is coordinating with local municipalities, developing new partnerships and pursuing funding opportunities. This work will bring Durham Region up to speed with some of the best-connected communities in the world.



[The Traffic Management Centre](#) is the heart of the Region's Smart Mobility efforts. It is where the Region works to optimize traffic flows on our road network and improve safety. This hub receives data from every traffic signal, 150 intersection cameras and other sources to monitor traffic flow, adjust traffic signal timing and respond to incidents. This centre helps residents get to where they need to go safely and efficiently.



## Social Investment

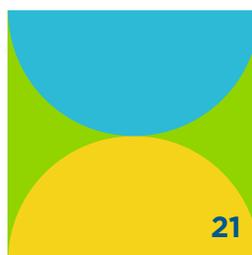
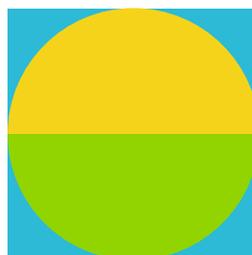
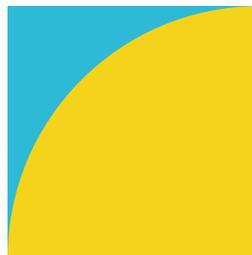
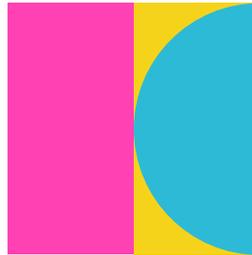
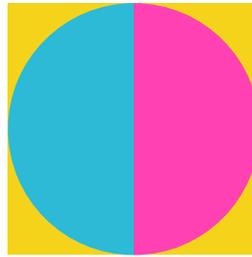
Trusted Youth are kids who are living on their own but are too young to receive social assistance directly. They are part of a system designed to support adults. To better support these youth, the Region began a review of our internal processes. We also participated in an applied research project with Durham College, community organizations and trusted youth. Based on data collected and the voice of youth themselves, the Region has made significant changes to improve services and give youth the support they need to be successful.



### Canada Learning Bond

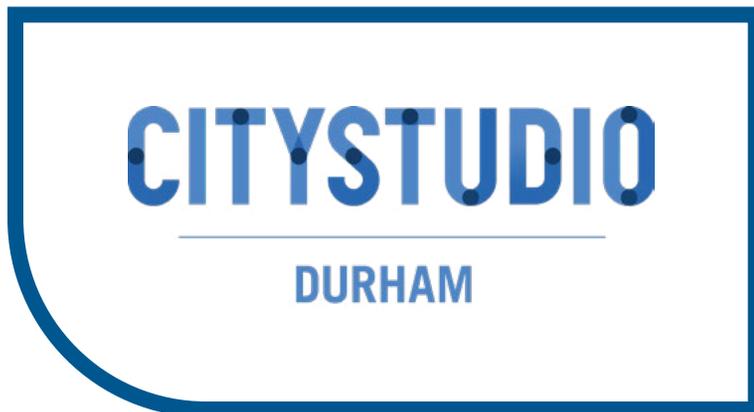


Research has shown that children who have savings for post-secondary are three times more likely to attend. The Canada Learning Bond is a federal government contribution to a Registered Education Savings Plan (RESP) to support the costs of education for families living with low income. The Region has partnered with other levels of governments, community organizations and financial institutions to host annual sign-up events. These events are a one-stop shop to create a pathway to the Canada Learning Bond for all eligible families.

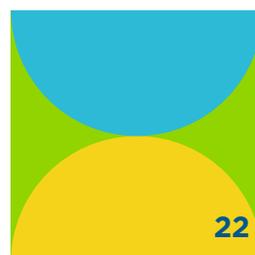
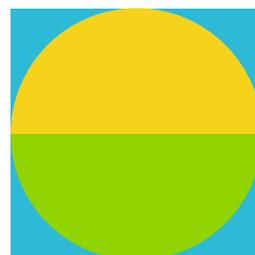
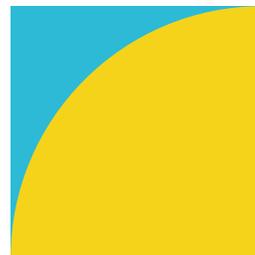
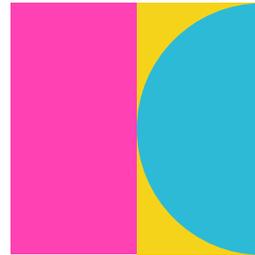
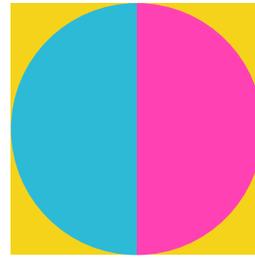


## Service Excellence

myDurham 311 is a transformational project aimed at improving the customer experience across all channels. This project will ensure service is always available and accessible. Customers will access support and information at the time that is right for them and in the manner they prefer. As the program rolls out, it will expand across all Durham municipalities.



The Region launched the CityStudio Durham collaborative initiative in partnership with our local post-secondary institutions. Through a web-portal, faculty and students connect to municipal staff to share ideas, develop collaborations and solve real world problems. CityStudio Durham engages students in their future by having them work on challenges in our community while they are in school. This is the opportunity to co-create the Durham of the future.



# Next Steps

Durham is eager to officially launch our Intelligent Communities Plan. Immediate next steps include:

- Establishing the necessary governance structures
- Developing engagement platforms
- Creating opportunities for Intelligent Communities project implementation
- Seeking official designation from Intelligent Communities Forum Canada

Durham's Intelligent Communities Plan lays out a framework to ensure that data and technology will be used to address the challenges identified by our communities to ensure Durham continues to be a strong, vibrant and resilient region.

# Appendix

Read more about the implementation of our Intelligent Communities Plan on our website at [durham.ca/IntelligentCommunities](http://durham.ca/IntelligentCommunities)

